

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/714,887 )  
In re application of: HEARD, Jacqueline E. *et al.* )  
Filed: 11/13/2003 )  
Art Unit: 1638 )  
Examiner: KRUSE, David H. )  
Docket No. MBI-0058CIP )  
Customer No. 47550 )

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Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 CFR 1.132 OF T. LYNNE REUBER**

I, T. Lynne Reuber, declare:

1. I received my Bachelor's degree from Drury College (now Drury University) in Springfield, Missouri, and a Ph.D. from the Massachusetts Institute of Technology. I was a post-doctoral fellow at Harvard Medical School. I joined Mendel Biotechnology, Inc. in June, 1998, and have been a Director of Research since January, 2002. In this declaration, I serve as an inventor and an expert witness in that my work has involved the isolation and characterization of plant genes and the use of cloned genes to modify a variety of traits in genetically transformed plants, specifically in the areas of regulation of environmental stress responses in plants. I am therefore familiar with the present invention. This declaration is being drafted as part of my normal duties to support research and intellectual property at Mendel Biotechnology, Inc. As compensation for employment at Mendel Biotechnology, I receive salary, benefits and stock options.

2. I understand that this application relates to transgenic plants comprising polynucleotides that encode novel plant transcription factor polypeptides first identified in *Arabidopsis thaliana*, a plant used experimentally as a model plant species. These transcription factor polypeptides can confer greater tolerance to water deprivation to transgenic plants when ectopically expressed.

3. For the purposes of this declaration, a plant "line" means the progeny (through seed or vegetative propagation) of a transformation event or a newly bred variety (specific genotype).


4. A DNA sequence coding for the *Arabidopsis* transcription factor G922 (SEQ ID NO: 4) was transformed into *Arabidopsis* plants to produce plant lines that ectopically express the G922 polypeptide. These transgenic plant lines were examined for tolerance to water deprivation.

Water deprivation assays were conducted with G922-overexpressing plant lines. Seedlings of these lines were grown for 14 days on MS+ Vitamins + 1% sucrose at 22° C. Plates were opened in the sterile hood for 3 hr for hardening and then seedlings were removed from the media and dried for two hours in the hood. After this time they were transferred back to plates and incubated at 22° C for recovery. Plants were visually evaluated after 5 days.

5. Out of twenty lines tested, four lines showed greater tolerance to water deprivation compared to control plants, sixteen lines showed no discernible difference compared to control plants

6. I hereby declare that all statements made herein are true and that they are based on my own knowledge, information and belief. These statements are made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued from it.

Date: January 20, 2010



T. Lynne Reuber, Ph.D.  
Director of Research  
Mendel Biotechnology, Inc.